

SHORT COMMUNICATION

Echinochloa dietrichiana (Poaceae: Panicoideae), a new species from Queensland and the Northern Territory

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In this short communication I formally describe a new Australian native species of *Echinochloa*, so that the name will be available for a forthcoming volume of *Flora of Australia*.

Echinochloa dietrichiana P.W. Michael, sp. nov.

Gramen annuum usque ad 1.5(-2) m altum. Ligulae interdum in centro usque ad 1 mm ciliatae. Paniculae, racemis dense dispositis, lineares, virides neque purpurascens, 10-27 cm longae, copiose setosae. Spiculae ovatae, uniformite 3 mm longae, patenter valdeque hispidae. Gluma inferior longe vel abrupte acuminata, basi inflato-truncata ad dimidium spiculae attingens. Gluma superior acuminata vel usque ad 1.5 mm aristata. Flosculus inferior sterilis, raro staminatus, lemmate 2-13(-15) mm longe aristato. Flosculus superior hermaphroditus, antheris 1-1.2 mm longis, caryopside brunneola 1.6-1.8 mm longa.

Holotype: Queensland: Cook District: South Johnstone, 17°33'S, 146°E, Bed of rivers on alluvial sand and gravel, R.H. Edmondson, 17 Jan 1969 (BRI 079502).

Annual grass up to 1.5(-2) m tall, culms 5- to 8-noded, often decumbent and rooting at the lower nodes; nodes glabrous. Lower leaf sheaths covering the more or less compressed internodes which are 5 to 9 mm wide and often only 5 cm long; leaf blades linear, rarely more than 10 mm broad, usually 20 cm or less long, occasionally up to 30 cm, narrowing to a long point; lower margins of leaf blades and upper margins of leaf sheaths smooth or scabrid, sometimes with long bulbous-based bristles; ligules usually glabrous but sometimes with cilia up to 1 mm long in the central portion. Panicles with densely arranged racemes, linear, green, not becoming purplish, 10-27 cm long, the lowermost and longest racemes scarcely spreading and (1.3-)3.5-5(-8) cm long; main rhachis, near the point of attachment of the branches, furnished with clusters of setae, often bulbous-based and up to 5 mm long; bristles scattered along the branches, often singly, not necessarily associated with the points of attachment of the spikelets. Spikelets crowded, ovate, uniformly 3 mm long, rarely longer, strongly and patently hispid, the bristles often bulbous-based and up to 1 mm long; pedicels paired, usually of unequal length, the longer no more than 1 mm long. Lower glume long- or abruptly acuminate, inflated-truncate at the base, about half the length of the spikelet, glabrous or sparsely puberulous except for the 5 inconspicuously hispid nerves; upper glume about as long as the spikelet, the 5 nerves strongly hispid with finely puberulous spaces between them. Lower floret sterile, rarely staminate, the lemma as long as the spikelet, bearing an awn 2-13(-15) mm long and with 5 strongly hispid nerves, spaces between the nerves glabrous or sparsely and very finely puberulous; palea membranous, narrower and just a little shorter than the lemma. Upper floret hermaphrodite, lemma crustaceous, glabrous except for the soft tip with minute hairs, enclosing the palea of similar texture; anthers 1-1.2 mm long. Caryopsis brownish, 1.6-1.8 mm long.

This non-weedy native Australian species occurs occasionally in seasonally flooded areas in coastal Queensland and Northern Territory, sometimes, according to collectors' notes, close to areas subject to tidal influence.

The epithet commemorates Amalie Dietrich (1821–1891), a remarkably skilful collector in the 1860s for the Hamburg merchants, J.C. Godeffroy and Son. Two of her specimens of this species from Rockhampton and near Mackay are in MEL.

The current extent and conservation status of this species are unknown but it would appear to be quite vulnerable to competition from exotic perennial grasses. It is likely to have been overlooked by recent plant collectors due to its superficial resemblance to other species of *Echinochloa*, both native and exotic.

Selected specimens: Queensland: Cook: Russells [Russell] River S. *Johnson s.n.*, 1892 (MEL); Daintree River, *Fitzalan s.n.*, 1875 (MEL); Cairns, *White s.n.*, Jan 1918 (NSW 113462). North Kennedy: Cromarty, near Townsville, 20°43'S, 148°35'E, *Blake* 8292, Mar 1935 (BRI); 'Toomba', NW Charters Towers, 19°58'S, 145°36'E, *Jacobs* 8112, June 1996 (NSW); Don River, near Edgcombe Bay, *Birch s.n.*, 1886 (MEL). South Kennedy: Bloomsbury about 50 miles [81 km] WNW Mackay, *Thomsett s.n.*, May 1969 (BRI 085751); prope Mackay, *Dietrich* 390, undated (MEL [ex Museo Godeffroy Hamburgensis]). Port Curtis: 'Torilla' between Broad Sound and Shoalwater Bay, 22°15'–20'S, 150°04'E, *Blake & Webb* 15623, Apr 1945 (BRI); 'Ubobo', property of W. Wedge, *Graham s.n.*, Apr 1958 (BRI 008372); Rockhampton, *O'Shanesy s.n.*, June 1867 (MEL); Gracemere, *O'Shanesy* 1631, Jan 1876 (MEL); Rockhampton, *Dietrich* 1820, Feb 1866 (MEL); Bobs Creek, 17 miles [27.4 km] S of Rockhampton, *Michael s.n.*, May 1972 (NSW 115945, BRI); Granite Creek c.45 km N of Marlborough, 22°37'S, 149°32'E, *Dalby* 95/01 & *Jacobs*, Apr 1995 (NSW); Yeppoon Wetlands beyond Capricornia International Resort, *Gray s.n.*, Aug 1995 (NSW 432046); Palm Creek, 23 km S of Miriam Vale, Bruce Hwy, *Jacobs* 2546 & *Rodd*, May 1976 (NSW). Wide Bay District: Maryborough, *Blake* 14331, Aug 1941 (BRI). Moreton: Enoggera, near Brisbane, *White s.n.*, Feb 1937 (BRI 070780).

Northern Territory: Outflow of Overflow Creek, Litchfield, in perennial swamp, 13°18'S, 130°28'E, *Russell-Smith* 6007 & *Lucas*, Oct 1988 (DNA); Adelaide River, 12°42'S, 131°30'E, *Wilson* 420, Apr 1990 (DNA).

E. dietrichiana has been confused with two other annual taxa, namely, the native *E. telmatophila* P.W. Michael & Vickery and *E. crus-galli* (L.) P. Beauv. ssp. *hispidula* (Retz.) Honda, an important weed of rice especially in the Indian sub-continent, south-east Asia, China and Japan.

The non-weedy nature of *E. dietrichiana*, its remarkably hispid spikelets and lack of purplish coloration in the inflorescence conveniently distinguish it from *E. crus-galli* ssp. *hispidula* in which, moreover, the panicle branches are less dense, the lower racemes often being whorled and somewhat spreading. The much less strongly hispid, elliptical spikelets of *E. crus-galli* ssp. *hispidula* are 3–4 mm long, the lower glume, which is often somewhat rounded at the base, is only one quarter to one third the length of the spikelet, while the awn of the sterile lemma is often between 20 and 40 mm long. The anthers of the fertile floret are generally shorter (0.7–0.9 mm) than in *E. dietrichiana*.

E. telmatophila is also non-weedy but its leaves are longer (often up to 35 cm) and broader (up to 18 mm) than in *E. dietrichiana* and its inflorescences are often purplish. The lower panicle branches are often longer (up to 10 cm) and its much less hispid spikelets, 3–4.2 mm long, are rather narrowly elliptical, gradually tapering towards the base. Awns arising from both the sterile lemma (up to 40 mm) and the upper glume (up to 7 mm) are much longer than in *E. dietrichiana*. Caryopses (1.8–2.3 mm), too, are longer.

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